



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002SD2B

Title: Lipid Geochemistry of Waters and Sediments in a Prairie Pothole Hydrologic System

Project Type: Research

Focus Categories: Groundwater, Water Quality, Hydrogeochemistry

Keywords: Groundwater, Big Sioux Aquifer, Dissolved Organic Carbon, Lipids, Organic Geochemistry

Start Date: 03/01/2002

End Date: 02/28/2003

Federal Funds Requested: \$21,000

Non-Federal Matching Funds Requested: \$50,518

Congressional District: First

Principal Investigator:

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Abstract

A study is proposed to describe the organic geochemistry of the lipid components of the dissolved organic carbon (DOC) of the Big Sioux Aquifer in eastern South Dakota. Previous studies have shown that selective sorption of DOC components to mineral surfaces as surface water percolates down into groundwater significantly alters the chemical characteristics of the DOC. The proposed study would identify qualitatively and quantitatively, the lipids components of the surface- and ground-water DOC using gas chromatography mass spectrometry. Experiments would be performed to assess the sorption behavior of lipids identified